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## **CURRICULUM VITAE**

### **APPOINTMENTS**

2001-current  
National Laboratory Research Scientist  
Joint Genome Institute & Lawrence Berkeley National Laboratory

2002-current  
Honorary Research Associate  
California Academy of Sciences, San Francisco

2002-current  
Museum of Vertebrate Zoology, University of California at Berkeley

### **POSTDOCTORAL TRAINING**

1999-2001. Asian Biogeography funded by the National Science Foundation.  
Washington University, St. Louis, MO

### **EDUCATION**

1992-1999, Ph.D., Washington University, St. Louis, MO, Degree August, 1999.

Molecular Phylogenetic Studies of Historical Biogeography in the Asian Herpetofauna  
and Evolution of the Vertebrate Mitochondrial Genome—Advisor Allan Larson

1988, B.A. Biology, University of California at Santa Cruz

### **RESEARCH EXPERIENCE**

1992-1999. Thesis research on two topics: Asian biogeography and evolution of the  
vertebrate mitochondrial genome.

I. Biogeography of Asian amphibians and reptiles using phylogenies based on  
mitochondrial DNA sequence data in conjunction with allozyme data (see below, 1989-

1992). Three levels of investigation are examined: (1) intercontinental comparisons to assess the biogeographic impact of Gondwanan subcontinental collisions on the fauna of the northern hemisphere, and the role of the Bering Strait in contributing Asian faunal elements to North America. (2) biogeography of desert regions in Asia, and (3) investigation of the fauna in Tibet using both arid and mesic faunas of Asia. Currently phylogenetic hypotheses have been generated for lizard groups—Acrodonta, *Laudakia*, *Phrynocephalus*, *Cyrtodactylus*, *Teratoscincus*, Asian & North American Scincidae, Eurasian & North American Anguimorpha; frog groups—Asian *Bufo*, Asian & North American Ranidae; and Salamanders—Hynobiidae and Salamandridae. Nine papers are published on this subject (see bibliography).

II. Evolution and phylogenetic utility of major structural features of the vertebrate mitochondrial genome. Structural features of the mitochondrial genome are analyzed phylogenetically to assess their phylogenetic utility. Mechanistic hypotheses for the evolution of major structural features of the mitochondrial genome are generated based on statistical and phylogenetic analyses. Six papers are published on this subject (see bibliography).

1989-1992. Molecular phylogenetic inference of arid Asian reptiles using allozyme electrophoresis at U.C. Berkeley, two papers are published based on these data (see bibliography).

1982-1988. Biogeographic research on the amphibians and reptiles of the Inyo and White mountains region of eastern California and western Nevada in preparation for two book chapters. One paper and two book chapters are published on this subject. (see bibliography).

## **FIELD EXPERIENCE**

2000. Turkey (one and a half months)—In collaboration with Ismiel Ugurtas of Uludag University, Bursa, Turkey.

1999. Iran (one month)—In collaboration with Soheila Shasii of the Shahid Bahonar University, Kerman, Iran.

1995. Turkmenistan and Kazakhstan (one month)—In collaboration with Ilya Darevsky and the Zoological Institute, St. Petersburg.

1993. Tibet (two months)—In collaboration with Ermi Zhao and the Chengdu Institute of Biology.

1992. Mongolia (one week)—In collaboration with Kh. Monkbayar and the Mongolian State Pedagogical University, Ullan Baatar.

Sichuan, and eastern China (two months)—In collaboration with Ermi Zhao and the Chengdu Institute of Biology.

Turkmenistan (one and a half months)—In collaboration with Ilya Darevsky and the Zoological Institute, St. Petersburg.

1990. Tibet (two months)—in collaboration with Ermi Zhao and the Chengdu Institute of Biology.

Russian deserts (one and a half months)—(on the western side of the Caspian Sea) In collaboration with Ilya Darevsky and the Zoological Institute, St. Petersburg.

1989. Turkmenistan, Georgia and Russia (one and a half months)—In collaboration with Ilya Darevsky and the Zoological Institute, St. Petersburg.

1988. Northwestern China and Tibet (two months)—In collaboration with Ermi Zhao and the Chengdu Institute of Biology.

1987. Northwestern China and northern Tibet (two months)—In collaboration with Ermi Zhao and the Chengdu Institute of Biology.

Thailand (one week).

French Polynesia (two weeks).

1986. Sichuan and northwestern China (one and a half months)—In collaboration with Ermi Zhao and the Chengdu Institute of Biology.

In addition, I have had field experience in Mexico (five times), Guatemala, West Indies (two times), Peru, Arizona, California, Colorado, Florida, Missouri, Nevada, New Mexico, North Carolina, Oklahoma, Texas, and Utah.

## **CURATORIAL EXPERIENCE**

1984-Summer. Curatorial Assistant in Charge of Herpetology Laboratory. Museum of Vertebrate Zoology, University of California at Berkeley.

1983-Summer. Curatorial Assistant in Herpetology. Museum of Vertebrate Zoology, University of California at Berkeley.

1985-Summer. Curatorial Assistant in Herpetology. Museum of Vertebrate Zoology, University of California at Berkeley.

## **TEACHING EXPERIENCE**

1993. Graduate Teaching Assistant, Washington University, St. Louis, MO, Comparative Vertebrate Physiology

1987. Teaching Assistant, University of California at Santa Cruz, Herpetology

1985. Teaching Assistant, University of California at Santa Cruz, Herpetology

## **HONORS AND AWARDS**

2001. Publisher's Award, the Society of Systematic Biologists

2001-declined. Parsons Postdoctoral Fellow, Natural History Museum of Los Angeles

1993-1996. National Science Foundation Predoctoral Fellowship.

1988. Honors in the Undergraduate Thesis. University of California at Santa Cruz

1987. Chancellor's Award, University of California at Santa Cruz  
for research on the California and Nevada deserts.

1983. Best Poster Presentation in Herpetology  
Herpetologist's League, Salt Lake City, Utah

## **GRANTS**

2002-current. - BAC Libraries of the Reptilia, Including Birds: Genomic Resources for  
Comparative Biology  
Awarded to Scott Edwards, Chris Amemiya and J. Robert Macey  
National Science Foundation  
Total Award \$1,121,330 (Subaward to Macey \$488,877)

2001-current. Impact of the Arabian Collision on the Iranian Plateau Herpetofauna  
Awarded to J. Robert Macey  
National Geographic Society  
Total Award \$19,775

1998-2001. Historical Inference of Biogeography Through Phylogenetic Reconstruction  
of Arid Asian Faunal Elements  
Awarded to Allan Larson, J. Robert Macey, and Theodore J. Papenfuss  
National Science Foundation  
Total Award \$200,000.

1992. The Biogeography of the Arid Asian Herpetofauna: An Evolutionary Model  
Awarded to Theodore J. Papenfuss, and J. Robert Macey  
Grant for Research and Exploration  
National Geographic Society  
Total Award \$30,000

1989. The Effects of the Himalayan Uplift on Arid Herpetofaunal Biogeography  
Awarded to Theodore J. Papenfuss, and J. Robert Macey  
Grant for Research and Exploration  
National Geographic Society  
Total Award \$20,000

1987. Exploration of the Chinese Amphibian and Reptile Fauna  
Principal Investigator, for Graduate Research, (while an undergraduate)  
Explorers Club  
Total Award \$1,000

1987. Exploration of the Chinese Amphibian and Reptile Fauna  
President's Undergraduate Fellowship  
University of California at Santa Cruz  
Total Award \$400

1984. Herpetological Studies of the Inyo and White Mountains Region of Eastern  
California and Western Nevada  
Environmental Field Program, University of California at Santa Cruz  
Total Award \$1,000

## **PROFESSIONAL SERVICE**

Associate editor, Asiatic Herpetological Research (1988-current).

Reviewed for: Biological Journal of the Linnean Society, Comparative  
Biochemistry and Physiology, Copeia, Herpetologica, Herpetological Monographs,  
Journal of Herpetology, Molecular Phylogenetics and Evolution, and Systematic Biology.

## **BOOK REVIEWS**

Macey, J. R. 2003. Review of "Tangled Trees, Phylogeny, Cospeciation, and  
Coevolution" edited by Roderic D. M. Page (2003), University of Chicago Press,  
Chicago. 350 p. The Quarterly Review of Biology (in press).

Macey, J. R. 2002. Review of "Phylogenetic Trees Made Easy: A How-To Manual for  
Molecular Biologists" by Barry G. Hall (2001), Sunderland Massachusetts: Sinauer  
Associates, Inc. 179 p. The Quarterly Review of Biology 77:196-197.

Macey, J. R. 2000. Review of "Describing Species: Practical Taxonomic Procedure for  
Biologists" by Judith E. Winston (1999), Columbia Univ. Press, New York, 518 p. The  
Quarterly Review of Biology 75:443.

## **PUBLICATIONS**

Schulte II, J. A., J. R. Macey, R. Pethiyagoda, and A. Larson. 2002. Rostral Horn  
Evolution Among Agamid Lizards of the Genus *Ceratophora* Endemic to Sri Lanka.  
Molecular Phylogenetics and Evolution 22:111-117.

Papenfuss, T. J., J. R. Macey, and J. A. Schulte. 2001. A New Lizard Species in the Genus *Xantusia* from Arizona. Scientific Papers, Natural History Museum, The University of Kansas 23:1-9.

Macey, J. R., J. L. Strasburg, J. A. Brisson, V. T. Vredenburg, M. Jennings, and A. Larson. 2001. Molecular phylogenetics of Western North American frogs of the *Rana boylei* species group. Molecular Phylogenetics and Evolution 19:131-143.

Weisrock, D. W., J. R. Macey, I. H. Ugurtas, A. Larson, and T. J. Papenfuss. 2001. Molecular phylogenetics and historical biogeography among salamandrids of the "true" salamander clade: Rapid branching of numerous highly divergent lineages with the rise of Anatolia in *Mertensiella luschani*. Molecular Phylogenetics and Evolution 18:434-448.

Macey, J. R., N. B. Ananjeva, Y. Wang, and T. J. Papenfuss. 2000. Phylogenetic relationships among Asian gekkonid lizards formerly of the genus *Cyrtodactylus* based on cladistic analyses of allozymic data: Monophyly of *Cyrtopodion* and *Mediodactylus*. Journal of Herpetology 34:258-265.

Macey, J. R., J. A. Schulte II, H. G. Kami, N. B. Ananjeva, A. Larson, and T. J. Papenfuss. 2000. Testing alternative hypotheses of vicariance in the agamid lizard *Laudakia caucasia* in mountain ranges on the northern Iranian Plateau. Molecular Phylogenetics and Evolution 14:479-483.

Macey, J. R., J. A. Schulte II, A. Larson. 2000. Evolution and phylogenetic information content of mitochondrial genomic structural features illustrated with acrodont lizards. Systematic Biology 49:257-277.

Macey, J. R., J. A. Schulte II, A. Larson, N. B. Ananjeva, Y. Wang, R. Pethiyagoda, N. Rastegar-Pouyani, and T. J. Papenfuss. 2000. Evaluating trans-Tethys migration: An example using acrodont lizard phylogenetics. Systematic Biology 49:233-256.

Schulte II, J. A., J. R. Macey, R. E. Espinoza, and A. Larson. 2000. Phylogenetic relationships in the iguanid lizard genus *Liolaemus*: Multiple origins of viviparous reproduction and evidence for recurring Andean vicariance. Biological Journal of the Linnean Society 69:75-102.

Macey, J. R., J. A. Schulte II, A. Larson, B. S. Tuniyev, N. Orlov, and T. J. Papenfuss. 1999. Molecular phylogenetics, tRNA evolution and historical biogeography in anguid lizards and related taxonomic families. Molecular Phylogenetics and Evolution 12:250-272.

Macey, J. R., Y. Wang, N. B. Ananjeva, A. Larson, and T. J. Papenfuss. 1999. Vicariant patterns of fragmentation among gekkonid lizards of the genus *Teratoscincus* produced by the Indian Collision: A molecular phylogenetic perspective and an area cladogram for Central Asia. Molecular Phylogenetics and Evolution 12:320-332.

Macey, J. R., J. A. Schulte II, N. B. Ananjeva, A. Larson, N. Rastegar-Pouyani, S. M. Shammakov, and T. J. Papenfuss. 1998. Phylogenetic relationships among agamid lizards of the *Laudakia caucasia* species group: Testing hypotheses of biogeographic fragmentation and an area cladogram for the Iranian Plateau. *Molecular Phylogenetics and Evolution* 10:118-131.

Macey, J. R., J. A. Schulte II, A. Larson, Z. Fang, Y. Wang, B. S. Tuniyev, and T. J. Papenfuss. 1998. Phylogenetic relationships of toads in the *Bufo bufo* species group from the eastern escarpment of the Tibetan Plateau: A case of vicariance and dispersal. *Molecular Phylogenetics and Evolution* 9:80-87.

Macey, J. R., J. A. Schulte II, A. Larson, and T. J. Papenfuss. 1998. Tandem duplication via light-strand synthesis may provide a precursor for mitochondrial genomic rearrangement. *Molecular Biology and Evolution* 15:71-75.

Schulte II, J. A., J. R. Macey, A. Larson, and T. J. Papenfuss. 1998. Molecular tests of phylogenetic taxonomies: A general procedure and example using four subfamilies of the lizard family Iguanidae. *Molecular Phylogenetics and Evolution* 10:367-376.

Macey, J. R., N. B. Ananjeva, Y. Wang, and T. J. Papenfuss. 1997. A taxonomic reevaluation of the gekkonid lizard genus *Teratoscincus* in China. *Russian Journal of Herpetology* 4:8-16.

Macey, J. R., A. Larson, N. B. Ananjeva, Z. Fang, and T. J. Papenfuss. 1997. Two novel gene orders and the role of light-strand replication in rearrangement of the vertebrate mitochondrial genome. *Molecular Biology and Evolution* 14:91-104.

Macey, J. R., A. Larson, N. B. Ananjeva, and T. J. Papenfuss. 1997. Evolutionary shifts in three major structural features of the mitochondrial genome among Iguanian lizards. *Journal of Molecular Evolution* 44:660-674.

Macey, J. R., A. Larson, N. B. Ananjeva, and T. J. Papenfuss. 1997. Replication slippage may cause parallel evolution in the secondary structures of mitochondrial transfer RNAs. *Molecular Biology and Evolution* 14:30-39.

Macey, J. R., and A. Verma. 1997. Homology in phylogenetic analysis: Alignment of transfer RNA genes and the phylogenetic position of snakes. *Molecular Phylogenetics and Evolution* 4:272-279.

Macey, J. R., and T. J. Papenfuss. 1991. The amphibians of the White-Inyo Range. Pp. 277-290. In C. A. Hall, jr. (ed.), *Natural History of the White-Inyo Range, Eastern California*. University of California Press, Berkeley.

Macey, J. R., and T. J. Papenfuss. 1991. The reptiles of the White-Inyo Range, Pp. 291-360. In C. A. Hall, jr. (ed.), Natural History of the White-Inyo Range, Eastern California. University of California Press, Berkeley.

Ananjeva, N. B., G. Peters, J. R. Macey, and T. J. Papenfuss. 1990. *Stellio sacra* (Smith 1935) - a distinct species of Asiatic Rock Agamid from Tibet. Asiatic Herpetological Research 4:104-115.

Losos, J. B., T. J. Papenfuss, and J. R. Macey. 1989. Correlates of sprinting, jumping, and parachuting performance in the Butterfly Lizard, *Leiolepis belliani*. Journal of Zoology, London 217:559-568.

Macey, J. R., T. J. Papenfuss, and E. Zhao. 1988. The snakes of Ningxia Hui Autonomous Region as an indication of a herpetofaunal corridor. Chinese Herpetological Research 2:4-5.

Zhao, E., J. R. Macey, and T. J. Papenfuss. 1988. A new species of *Rana* from Ningxia Hui Autonomous Region. Chinese Herpetological Research 2:1-3.

Macey, J. R. 1986. The biogeography of a herpetofaunal transition between the Great Basin and Mojave deserts. Pp. 119-128 In C. A. Hall, jr. and D. J. Young (eds.), Natural History of the White-Inyo Range, eastern California and western Nevada and high altitude physiology: University of California White Mountain Research Station Symposium, August 23-25, 1985, Bishop, California. Volume 1:i-240.

Macey, R. J. 1983. *Charina bottae bottae* (Pacific Rubber Boa) food. Life History Notes. Herpetological Review 14:19.

## **NATURAL HISTORY PHOTOGRAPHY**

Macey, J. R. 1999. 12 photos, In S. C. Anderson. The Lizards of Iran. Contr. to Herptol. 15, Soc. Study of Amph. and Rept., Oxford, Ohio.

Macey, J. R. 1996. 1 photo, In N. N. Szczerbak and M. L. Golubev. Gecko fauna of the USSR and contiguous regions. Contr. to Herptol. 13, Soc. Study of Amph. and Rept., Oxford, Ohio.

Macey, J. R. 1993. 71 photos, In E. Zhao and K. Adler. Herpetology of China. Contr. to Herptol. 10, Soc. Study of Amph. and Rept., Oxford, Ohio.